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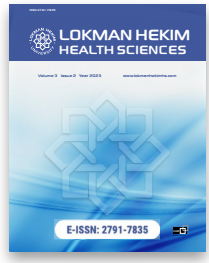

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ORIGINAL ARTICLE

Anxiety and Depression in Behçet's Disease Without Explicit Neurological Involvement

Aşikar Nörolojik Tutulumu Olmayan Behçet Hastalarında Anksiyete ve Depresyon

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Abstract

Introduction: Behçet's disease (BD) is a systemic inflammatory disease that affects all arterial and venous vessels. It goes with exacerbation and remission, and stress has been considered a factor for exacerbation of symptoms. High rates of depression and anxiety have been reported in BD. It has been claimed that medications used in treatment and loss of functionality may be the underlying cause of these high rates. In our study, by especially considering patients without neurological involvement, we aimed to evaluate anxiety and depression in cases where anxiety and depression were not triggered by organic causes.

Methods: Thirty-nine subjects diagnosed with BD and 79 healthy controls were included in this study. Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), and Behçet's Disease Current Activity Form were applied to all the participants.

Results: All the participants' ages ranged between 24 and 69 years (median=41; IQR=10). Sixty-nine of them were females. There was no significant difference between the groups according to sociodemographic characteristics. Although BD patients were in remission, BDI and BAI scores were significantly higher in the BD group compared to the healthy control group (p=0.006 and p=0.003, respectively).

Discussion and Conclusion: In our study, BD patients exhibited more anxiety and depression symptoms. Although the patients did not have active lesions, one of the reasons why they were more depressive and anxious may be due to attitudes and prejudices about the disease.

Keywords: Anxiety; Behçet's disease; Depression

Behçet's disease (BD) is a systemic inflammatory disease that affects all arterial and venous vessels. It is more common in countries on the ancient silk road.[1] Its prevelance in Türkiye is 20-421/100.00.[2] Prevalence in Europe and the USA ranges between 0.1 and 7.5/100.000.[3,4] BD is often seen with recurrent oral and genital ulcers, musculocutaneous lesions such as erythema nodosum, and uveitis. During the course of the disease, many differ-

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ent systems such as the gastrointestinal system, pulmonary system, and joints can be affected, but neurological involvement is observed at a rate of 5.3%–38%.[5,6]

BD is a disease that goes with exacerbations and remission. It has been claimed that stress may play a role in triggering inflammatory diseases.[7,8] It has been reported that patient's quality of life decreases in exacerbation of symptoms. Considering that the decrease in the quality of life will increase the stress, the increase in stress and depressive mood creates a vicious circle.[9,10] It has been reported that the rate of depression and anxiety is more common in chronic diseases such as BD with high morbidity and mortality.[9,11–15]

Medications used in treatment, especially Corticosteroids, and loss of functionality were found to be associated with the etiology of the prevalence of depression in BD.[16] Some researchers have found that depression is associated with Neuro-Behçet's disease. Patients with neurological involvement were also frequently included in studies examining the prevalence of depression in BD. Only one study was done in patients with BD without explicit neurological involvement.[17] This study showed no difference between the depression scores of Behçet's patients and healthy controls. The authors claimed that the lack of difference may be related to the fact that the patients did not use corticosteroids because they were not in an attack. In our study, by especially considering patients without neurological involvement, we aimed to evaluate anxiety and depression in cases where anxiety and depression were not triggered by organic causes.

Materials and Methods

Participants

Thirty-nine subjects diagnosed with BD and 79 healthy controls were included in this study. Those with hypertension, diabetes mellitus, and other chronic disease were not included in the study. In the BD group, all patients fulfilled the criteria of the International Study Group for Behçet's Disease and none had neurological involvement. Also, all the patients were in the inactive phase of their disease.

Study Procedure

This is a single-center study. It was approved by the Ankara University Ethical Committee (date: March 2016, no: 06.25316-2016/03). The study complied with the principles of the Declaration of Helsinki. Sociodemographic forms, Beck depression, and Beck anxiety scales were administered to all participants. Those with a score of 15 or more on the Beck depression scale are in a depressive episode. A score of less than 15 was accepted as "no depressive episode." Those with a score of 15 or more on the Beck anxiety scale have "anxiety." A score of less than 15 was accepted as "no anxiety."

Questionnaires

Beck Anxiety Inventory (BAI): BAI is a self-report scale that evaluates how often an individual experiences anxiety symptoms. It consists of 21 items and each item is scored between 0 and 3. The validity and reliability study of the UAE Turkish version was conducted by Ulusoy et al.,[18] and Cronbach's alpha value was found to be 0.93.

Beck Depression Inventory (BDI): BDI is a Likert-type, self-rating scale comprising 21 items related to depression.[19,20]

Behçet's Disease Current Activity Form (BDCAF): BDCAF includes 12 clinical categories over 4 weeks prior to the day of assessment. Clinical symptoms include headache, oral ulcers, genital ulcers, erythema nodosum, skin pustules, arthralgia, arthritis, nausea or vomiting or abdominal pain, diarrhea or hematochezia, and symptoms of involvement of the eyes, nervous system, and major vessels. Scores of 0–1 are given based on the existence or absence of symptoms or findings with the agreement that the symptoms were due to BD. The total score of this form ranges between 0 and 12 points.[21,22]

Statistical Analysis

An analysis of the data was done in SPSS 23 Macintosh version (IBM SPSS Statistics, USA). As descriptive statistics, mean±standard deviation and median (minimum–maximum) are given for quantitative variables and the number of cases (percent) for qualitative variables. Whether there was a statistically significant difference between the groups in terms of quantitative variables was checked with the Student's t test if the normal distribution assumptions were met and the Mann–Whitney U test if they were not. The Chi-squared test or Fisher's exact test was used to examine the relationship between two qualitative variables.

Results

Age, gender, marital state, education, working condition, Behçet Diseases Activity Index (BHAI), age of onset of BD, and duration of illness of the participants were recorded. All of the participants' ages ranged between 24 and 69

Table 1. Sociodemographic characteristics of patients and healthy control group

Variables	BD (n=39)	Control (n=79)	p
Age			0.907[a]
Mean±SD	41.69±9.95	41.89±7.54	
Median, (min–max)	39 (26–69)	41 (24–59)	
Gender, n (%)			0.938[b]
Female	23 (59.0)	46 (58.2)	
Male	16 (41.0)	33 (41.89	
Duration of BD			
Mean±SD	9.33±7.54	–	
Median, (min–max)	8 (0–30)	–	
Level of education, n (%)			0.655[c]
Illiterate	0 (0)	0 (0)	
Literate	0 (0)	2 (2.5)	
Elementary	18 (46.2)	27 (34.2)	
High school	15 (38.5)	34 (69.4)	
College	1 (2.6)	3 (3.8)	
University	5 (12.8)	13 (16.5)	
Marital status, n (%)			0.631[c]
Single	3 (7.7)	11 (13.9)	
Married	35 (89.7)	66 (83.5)	
Divorced	1 (2.6)	1 (2.6)	
Widow	0 (0)	1 (1.3)	
Separated	0 (0)	0 (0)	
Working condition, n (%)			0.444[c]
Employee	16 (41.0)	44 (55.7)	
Self-employed	3 (7.7)	7 (8.9)	
Retired	3 (7.7)	3 (7.7)	
Housewife	17 (43.6)	24 (30.4)	
Unemployed	0	1	

BD: Behçet's disease; SD: Standard deviation; n: Number; p<0.05; a: Student's t test; b: Chi-squared test; c: Fisher's exact test.

years (median=41; IQR=10). The age of females (n=69) ranged between 26 and 69 years (median=40, IQR=11) and that of males (n=49) ranged between 24 and 61 years (median=42, IQR=12). There was no significant difference between the groups according to sociodemographic characteristics. The sociodemographic characteristics of participants are summarized in Table 1.

The median BDAI score was 2 (0–8) in the BD group. All BD patients were in the remission phase. BDI and BAI scores were significantly higher in the BD group compared to the healthy control group (p=0.006 and p=0.003, respectively). Anxiety and depression rates of the BD group were significantly higher than the healthy controls (Table 2).

Table 2. Comparison of groups in terms of Beck anxiety and Beck depression scores

Variables	BD (n=39)	Control (n=79)	p
Beck depression score			0.006[a]
Mean±SD	16.69±10.61	11.3±9.31	
Median, (min–max)	16 (0–43)	10 (0–34)	
Depression, n (%)			
Yes	20 (51.3)	24 (30.4)	0.023[b]
Beck anxiety score			0.003[a]
Mean±SD	17.67±12.52	11.21±9.74	
Median, (min–max)	16 (0–48)	8 (0–33)	
Anxiety, n (%)			
Yes	22 (56.4)	22 (27.8)	0.004[b]

BD: Behçet's disease; SD: Standard deviation; n: Number; p<0.05; a: Student's t test; b: Chi-squared test.

Discussion

Stress has an important role in the follow-up of chronic diseases, as it causes exacerbation of many chronic inflammatory diseases. Depression and anxiety are important indicators of human stress. In the literature, it has been reported many times that anxiety and depression increase in BD.[7,23–25] It has been claimed that the source of this increase is the activation of disease, loss of function, or corticosteroid.[16] For this reason, we aimed to examine the frequency of anxiety and depression by including patients who were not in the activation period and did not have neurological involvement in the study. Our results showed that even if patients are in clinical remission, their anxiety and depression are higher than healthy controls. This shows that anxiety and depression are more common in this patient group, regardless of drugs and disability.

In the literature, it has been shown that anxiety and depression are higher in healthy controls in Behçet's patients, including patients with neurological involvement.[7,23–25] There is one study in the literature that included patients without neurological involvement. In this study, Behcet's patients scored significantly higher than healthy controls. The authors also observed that Behçet's patients got significantly lower scores on neuropsychological tests.[17] The authors claimed that they would consider this executive dysfunction as a result of mild depressive states due to chronic disease stress or silent and/or future neurological involvement of BD. Consistent with this finding, we also found in our study that patients with BD who were formal and had no neurological involvement were more depressed and anxious than healthy controls. In future research, it may be evaluated in longitudinal studies to see if being more anxious and depressed may be a precursor to neurological involvement.

In our study, even if the patients did not have active lesions, one of the reasons why they were more depressive and anxious may be due to attitudes and prejudices about the disease. In a recent study, it has been shown that there is a relationship between illness perception and disease course and symptoms in BD. Emotional reactions following the onset of symptoms are more commonly observed in female patients.[24] They claimed that this negative perception may also affect the management of the disease. For this reason, a patient education program that includes the frequency and clinical course of the risks of the disease may be beneficial for patient empowerment in disease management and reduce the stress of the patient.

Peer-review: Externally peer-reviewed.

Ethics Committee Approval: The Ankara University Clinical Research Ethics Committee granted approval for this study (date: March 2016, number: 06.25316-2016/03).

Authorship Contributions: Concept: YHA, MKK; Design: YHA, MKK; Supervision: YHA, MKK; Materials: YHA, MKK; Data Collection or Processing: YHA, MKK; Analysis or Interpretation: YHA, MKK; Literature Search: YHA, MKK; Writing: YHA, MKK; Critical Review: YHA, MKK.

Conflict of Interest: None declared.

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